Natural Resources Management Program

AN ADDENDUM
TO THE NATURAL
RESOURCES MANAGEMENT PLAN
FOR

Lassen Volcanic National Park
California

APRIL 1981 REVISION

Prepared by
Lassen Volcanic National Park
NATIONAL PARK SERVICE/DEPARTMENT OF THE INTERIOR

Digitized by the Internet Archive
in 2012 with funding from
LYRASIS Members and Sloan Foundation

http://archive.org/details/naturalresources00nati

TO HOLDERS OF NATURAL RESOURCES MANAGEMENT PROGRAM

LASSEN VOLCANIC NATIONAL PARK, JULY 1979

This package represents a revision of the 1979 plan. To simplify revision of the document: pull staples, punch pages and place in a 3-ring binder. Delete original pages and replace with new pages from this package as follows:

Delete	Add
Cover Page - 1979	Cover Page - 1981
Title Page - 1979	Title Page - 1981
Pages i through iii	Pages i through v
Pages A10 through A15	Pages A10 through A15
Pages A18 and A19	Pages A18 and A19
Pages A22 and A23	Pages A22 and A23
Pages A28 through A33	Pages A28 through A33
Pages A38 through A41	Pages A38 through A41
Pages A60 through A61	Pages A60 through A61

NATURAL RESOURCES
MANAGEMENT PROGRAM

AN ADDENDUM TO THE NATURAL RESOURCES MANAGEMENT PLAN FOR LASSEN VOLCANIC NATIONAL PARK

Prepared by

LASSEN VOLCANIC NATIONAL PARK
NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR

April 1981

INTRODUCTION

The Management Program is the action document which implements the Natural Resource Management Plan and consists of the following:

1. Overview and Needs.

2. Natural Resources Projects that serve as "blueprints" for proposed actions.

3. A Natural Resources Projects Programming Sheet listing each project and showing: its relative park priority; funding and manpower requirements; and a time sequence for a five-year period.

While the Natural Resources Management Plan is concerned with a proposed long-term action program, the management program deals with the next five years only. The program presented here begins with Fiscal Year 1982. Each subsequent year the management program will be revised and updated for a new five-year period as work is completed and new projects are proposed.

OVERVIEW AND NEEDS

All of Lassen Park's significant resources problems relate to altered or destroyed natural systems or processes. These problems exist primarily because of the activities of modern man and include in-house management and use as well as external land use and political influences. The most significant specific problems include changes resulting from fire exclusion, concentrated visitor use, introduced exotic species and trespass grazing. Of lesser effect but still significant are unnatural behavior of some native animals and depressed or lost populations of other native species. Another problem area that may prove to be more significant than all others is a lack of knowledge about the basic composition and function of many ecosystems. In many cases we do not know what constitutes the resource being managed nor the effect that sometimes arbitrary management and use is having on the individual components and ultimately on the system as a whole.

The ideal problem solution approach would be to determine in considerable detail what constitutes the parks natural systems and how they function. Following that, necesssary corrective or restorative action could be identified and implemented. Although ideal, this approach is not very realistic. Damage to some resource components is extensive enough to require immediate corrective action. It is necessary, therefore, to do some active management of damaged resources. At the same time, research is needed to provide basic inventories and to identify hidden cause and effect relationships. Finally, monitoring will be needed to detect adverse change requiring correction and to determine the effects of ongoing management programs.

Priority ranking of proposed management, research and monitoring projects is based on the existing and projected extent of resource damage that the problem will likely cause. Based on this criteria, the proposed five-year program for Lassen Park includes 13 research projects, 6 management projects and 5 monitoring proposals (Page A61).

Fiscal Year 1983. The most extensive existing and potentital damage has resulted from concentrated visitor use and fire suppression. The full extent of damage will be determined by ecological research and monitoring of aquatic and terrestrial sites. The beginning phases of returning natural fire to park ecosystems will be accomplished through implementation of a cooperative National Park Service - Forest Service fire management plan.

Fiscal Year 1984. Research and monitoring started in FY 1983 will be continued and the fire program will be modified where necessary and will be expanded by inventorying fuels in areas outside of initial natural fire units. New research will be introduced to document ecosystem history and determine ungulate-vegetation relationships.

Fiscal Year 1985. Based on research completed in 1983 and 1984, a water resources plan will be developed and a deer management plan will be written and implemented. Research is proposed to determine the feasibility of reintroducing bighorn sheep. Monitoring will be expanded to include air quality.

Fiscal Year 1986. New research will consider the status of depressed mustelid populations and determine baseline data for park streams. Existing limited bear management activities will be expanded to all human activity areas and to backcountry.

Fiscal Year 1987. Mustelid and stream research will be completed. New research will include ecology and endangered plant surveys. Exotic beavers will be removed from the Warner Valley area and drainage in the Warner basin will be restored to historic patterns. Geological monitoring will be expanded to include precipitous rock outcrops on Diamond Peak.

Summary. This five-year program will emphasize securing baseline information and in performing stop-gap management. Future years will emphasize resource management based on research performed during this period. Research emphasis can then shift from extensive to intensive needs identified through previous monitoring and research.

TABLE OF CONTENTS

		Page Number
INTRODUCTION		i
OVERVIEW AND NEEDS		ii
CURRENT AND PROPOSED NATURAL SCIENCE PROJECTS		
Reference Number	Project Title	
N-33	Inventory Biotic Communities	A 6
N-34	Meadow Ecology	A 8
N-35	Chaparral Ecology	A10
N-36	Endangered Plant Survey	A12
N-37	Analysis of pre-Columbian Ecosystems	A14
N-38	Willow and Alder Ecology	A16
N-40	Inventory Aquatic Biota	A18
N-41	Resource Inventory - Streams	A20
N-42	Lake Ecology	A22
N-43	Wolverine and Fisher Status Survey	A25
N-44	Study Feasibility of Reintroducing Bighorn	A27
W- 1	Water Resources Survey	A29
W- 2	Monitor Diamond Peak	A31
W- 3	Geological Mapping	A33
CURRENT AND PROPOSED RESOURCES MANAGEMENT PROJECTS		
RM-1	Peregrine Falcon and Bald Eagle Survey	A35
RM-2	Beaver Census and Habitat Survey	A37

RM-3	Deer Herd and Ranger Monitoring	A40
RM-4	Bear Management	A42
RM-5	Forest Fuel Inventories	A44
RM-6	Monitor Natural Fire	A47
RM-7	Prescribed Fire	A50
RM-8	Monitor Aquatic Ecosystems	A53
RM-9	Restore Historic Drainage Patterns	A55
RM-10	Backcountry Use Monitoring	A57
RM-11	Monitor Air Quality	A59

NATURAL RESOURCES PROGRAMMING SHEET A61

PROGRAMS COMPLETED OR UNDERWAY

N-14	Historic Research - Beaver	A 1
N-31	Inventory Consumer Organisms	A 4
RM-1	Peregrine Falcon and Bald Eagle Survey	A35

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Chaparral Ecology

   LAVO-N-35

3. STATEMENT OF PROBLEM:

   A sizeable amount of the park contains a chaparral vegetation type. Many of the stands are overmature and in others, fir trees have invaded and are suppressing the brush species. Fire suppression is known to be a principal cause of decadence and fir invasion, but other ecological relationships of this important type are little understood.

4. WHAT HAS BEEN DONE:

   Nothing has been done. Some stands are included in the proposed natural burn units (LAVO-RM-11) and others will have fuels evaluated in project (LAVO-RM-10).

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Mapping, classification and description of scrub communities is proposed in Project No. LAVO-N-33. Information from that study will form the basis for analysis of the ecological relationships in the chaparral communities. Selected sites will be intensively studied as representative of chaparral parkwide.

6. LENGTH OF TIME NEEDED:

   Two years.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Without an understanding of the basic relationships, it will not be possible to determine the primitive processes nor to restore them.

8. WHAT ARE THE ALTERNATIVES:

   The alternative is to not evaluate these communities.

9. PERSONNEL:

   University Contract.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Seq			
	1st	2nd	3rd	4
Personal Services	None	None	None	Nor
Other Than Personal Services	$10,000	$10,000	None	Non
GRAND TOTAL	$10,000	$10,000	None	None
Funds Available in Park Base	None	None	None	None
Funds Requested from Regional Office	$10,000	$10,000	None	None

On Form	Date Submitted
10-237	
10-238	
10-250	
10-451	

11. REFERENCES AND CONTACTS:

Parsons, D.J., 1976. Chaparral. Pacific Discovery. Mar./Apr. pp. 21-27.

Abrams, L. and R.S. Ferris. 1960. Illustrate flora of the pacific states, Vol. IV. Stanford Univ. Press. 732 pp.

Gillett, G.W., J.T. Howell and H. Leschke. 1951. A flora of Lassen Volcanic National Park, Calif. The Wasmann Journ. of Biol. 19(1):1-185.

Munz, P.A., and D.D. Keck. 1959. A California flora. Univ. of Calif., Press, Berkeley. 1681 pp.

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Endangered Plant Survey

   LAVO-N-36

3. STATEMENT OF PROBLEM:

   The proposed federal list of threatened and endangered plants, includes three species found in the park. In addition, the presence of nine subspecies on the federal list needs to be confirmed. The Endangered Species Act requires protection of these plants on federal lands. Investigators will also evaluate all other plants in the park that may need special protection.

4. WHAT HAS BEEN DONE:

   The three endangered species were listed and their occurrence at several locations noted in previous studies.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Existing data need to be reviewed and locations checked for currency. Field investigations will be conducted to determine total extent of the three species' ranges in the park and the nine subspecies will be checked to determine their status and the extent of their ranges. Habitat requirements will be determined for all twelve plants.

6. LENGTH OF TIME NEEDED:

   Two years.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Plans for perpetuating the species will have to be formulated without knowledge of where they occur and without sufficient information about their requirements.

8. WHAT ARE THE ALTERNATIVES:

   Do nothing and risk loss of several species from the park flora.

9. PERSONNEL:

   Contract.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	None	None	None	None	$10,000
GRAND TOTAL	None	None	None	None	$10,000
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	None	None	$10,000

On Form		Date Submitted
10-237	X	1/13/78
10-238		
10-250		
10-451		

11. REFERENCES AND CONTACTS:

Jepson, W.L., 1951. A manual of the flowering plants of California. Univ. of Calif. Press, Berkeley. 1238 pp.

Gillett, G.W., J.T. Howell and H. Leschke. 1961. A Flora of Lassen Volcanic National Park, California. Univ. of San Francisco. 185 pp

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Analysis Of Pre-Columbian Ecosystems With Recommendations For Restoring Natural Processes.

LAVO-N-37

3. STATEMENT OF PROBLEM:

Restoration of primitive systems requires knowledge of the components of those systems; particularly the biotic components, some of which are known to have been extirpated due to modern man's activities.

4. WHAT HAS BEEN DONE:

Reintroduction of natural fire is proposed to restore a non-biotic component to the park's ecosystems. The bighorn sheep has been tentatively determined to be an extirpated component.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

Historic research will be conducted to determine as nearly as possible the pre-Columbian composition of the park's ecosystems.

6. LENGTH OF TIME NEEDED:

One year.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

It will not be possible to realistically restore natural processes without knowledge of their composition.

8. WHAT ARE THE ALTERNATIVES:

Do not research the historic composition.

9. PERSONNEL:

University Contract.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	None	$10,000	None	None	None
GRAND TOTAL	None	$10,000	None	None	None
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	$10,000	None	None	None

On Form	Date Submitted
10-237	_____
10-238	_____
10-250	_____
10-451	_____

11. REFERENCES AND CONTACTS:

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Inventory Aquatic Biota

   LAVO-N-40

3. STATEMENT OF PROBLEM:

   Some water bodies in the park have had determinations made of the relative abundance of aquatic plants and animals, but a more detailed listing is needed to form a basis for monitoring changes in the various systems.

4. WHAT HAS BEEN DONE:

   Only a few lakes have sufficient data bases to enable detection of gross changes by monitoring.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Selected lakes and streams will be sampled to determine the biotic components and their abundance. The result should be comprehensive species lists of producer, decomposer and consumer organisms representing a reasonable cross section of the park's aquatic life. A report will be prepared that evaluates aquatic populations, identifies further research needs and makes recommendations for managing biological communities.

6. LENGTH OF TIME NEEDED:

   Three years.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Extrapolation of limited data will have to be relied upon to determine changes resulting from management and use. Deterioration of natural components may reach irreversible proportions before detection.

8. WHAT ARE THE ALTERNATIVES:

   Do not inventory.

9. PERSONNEL:

   University Contract.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	$10,000	None	None	None	None
GRAND TOTAL	$10,000	None	None	None	None
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	$10,000	None	None	None	None

On Form	Date Submitted
10-237	
10-238	
10-250	
10-451	

11. REFERENCES AND CONTACTS:

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Lake Ecology

   LAVO-N-42

3. STATEMENT OF PROBLEM:

   All lakes in the park of significant size have been altered to varying degrees by the introduction of fishes. Most of them have reverted to a fishless state; a few are still being stocked and seven now have self-regenerating trout populations.

4. WHAT HAS BEEN DONE:

   Three of the seven lakes supporting trout have undergone indepth studies of some of the more significant ecological components.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Four trout producing lakes will be studied to determine their biotic and abiotic components and to evaluate the ecological interrelationships. The results will be used in formulating future management plans.

6. LENGTH OF TIME NEEDED:

   Two years.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Management will have to continue based on extrapolations from other aquatic studies.

8. WHAT ARE THE ALTERNATIVES:

   Do not evaluate the lakes.

9. PERSONNEL:

   University Contract.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	None	None	None	None	$10,000
GRAND TOTAL	None	None	None	None	$10,000
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	None	None	$10,000

On Form	Date Submitted
10-237	_____
10-238	_____
10-250	_____
10-451	_____

11. REFERENCES AND CONTACTS:

Everest, F.H., 1963. A survey of Horseshoe and Snag Lakes and their tributaries, Lassen Volcanic National Park. Unpub. NPS Doc., Mineral, California 47 pp.

Everest, F.H., 1964. A survey of Juniper Lake, Lassen Volcanic National Park. Unpub. NPS Doc., Mineral, California 33 pp.

Hubbell, P.H., 1960. A survey of general biological conditions in a group of lakes in Lassen Volcanic National Park. Unpub. NPS Doc., Mineral, California 46 pp.

Hubbell, P.H., 1961. A survey of Manzanita and Reflection Lakes, Lassen Volcanic National Park. Unpub. NPS Doc., Mineral, California 59 pp.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	None	None	$10,000	$10,000	None
GRAND TOTAL	None	None	$10,000	$10,000	None
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	$10,000	$10,000	None

On Form	Date Submitted
10-237	_____
10-238	_____
10-250	_____
10-451	_____

11. REFERENCES AND CONTACTS:

Leopold, A.S., S.A. Cain, C.M. Cottam, I.N. Gabrielson and T.L. Kimball. 1963. Wildlife management in the National Parks. Amer. For. 69(4): pp. 32-35, 61-63.

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Park Water Resources Management Plan

   LAVO-W-1 (Revision of former project (W-1) entitled: Water Resources Survey).

3. STATEMENT OF PROBLEM: In compliance with Public Law 92-500 (Federal Water Pollution Control Act) and as amended by Public Law 95-217 (Clean Water Act of 1977) and as furthered by the Service Memorandum of Understanding with Environmental Protection Agency (EPA), each area must develop a Park Water Plan.

4. WHAT HAS BEEN DONE: No comprehensive water quality management plan has been developed for the area.

5. DESCRIPTION OF WORK TO BE UNDERTAKEN:

   a. An historical report on management of water resources in the park.

   b. Classification of all surface waters by present and proposed uses.

   c. An analysis of the present status of park waters, including:

      (1) Identification of water quality required to support specified uses and, where approproate, to comply with or assist in establishing State water quality standards.

      (2) Relationship of water quality to any threatened, known, rare or endangered species indigenous to the park and the relationship of water quality to the production of all natural resources.

      (3) A bibliography of available information concerning the existing quality of park waters.

   d. A description of proposed actions relating to management of park waters.

   e. A detailed plan for monitoring the quality of park waters that will reveal existing water quality and significant trends.

   Future coordination/cooperation with EPA and the State is required to ascertain established water standards.

6. LENGTH OF TIME NEEDED: One year.

7. WHAT WILL HAPPEN IF PROJECT NOT UNDERTAKEN: Service noncompliance with the above Federal laws.

8. WHAT ARE THE ALTERNATIVES: None

9. PERSONNEL: Regional assistance with contracted U.S. Geological Survey to develop/initiate basic aspects. After which, future monitoring will be done by area staff.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other than Personal Services	None	None	$10,000	$10,000	None
GRAND TOTAL	None	None	$10,000	$10,000	None
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	$10,000	$10,000	None

On Form	Date Submitted
10-237	_____
10-238	_____
10-250	_____
10-451	_____

11. REFERENCES AND CONTACTS:

12. DATE SUBMITTED: April, 1981

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Monitor Diamond Peak

   LAVO-W-2

3. STATEMENT OF PROBLEM:

   Diamond Peak has several eroded outcroppings which appear to be detached boulders. At present, they are stable, however, erosional factors and earthquakes could dislodge these and create a threat to the park road and vista parking area below.

4. WHAT HAS BEEN DONE:

   The site has been evaluated by geologic consultants, Dames and Moore.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   The site will be evaluated further to determine what type of monitoring equipment is appropriate and monitoring procedures will be developed.

6. LENGTH OF TIME NEEDED:

   One year.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Stability of the outcroppings could deteriorate undetected and become a serious hazard to visitors using the park road.

8. WHAT ARE THE ALTERNATIVES:

   The "no action" alternative is to not monitor.

   Remove the outcroppings by mechanical means or by blasting at a time when visitor safety can be assured.

9. PERSONNEL:

   Contract Geological Consultants.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	None
Other Than Personal Services	None	None	None	None	$5,000
GRAND TOTAL	None	None	None	None	$5,000
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	None	None	$5,000

On Form		Date Submitted
10-237		
10-238	X	8/26/75
10-250		
10-451		

11. REFERENCES AND CONTACTS:

Dames and Moore, Geological Consultants.

12. DATE SUBMITTED: February, 1979.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Geological Mapping

   LAVO-W-3

3. STATEMENT OF PROBLEM:

   Preservation and management of geologic features and phenomena requires an inventory of locations and extents of their features.

4. WHAT HAS BEEN DONE:

   The northern one-third of the park has been mapped by the U. S. Geological Survey.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Map geological features and phenomena in the south two-thirds of the park in the same detail as that already completed for the north one-third of the park.

6. LENGTH OF TIME NEEDED:

   Two years.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Management will continue without basic knowledge about location and extent of features to be managed.

8. WHAT ARE THE ALTERNATIVES:

   The alternative is not to map.

9. PERSONNEL:

   Contract.

9. PERSONNEL:

Two technicians GS-4, 0.6 MY.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	None	None	$2,900
Other Than Personal Services	None	None	None	None	300
GRAND TOTAL	None	None	None	None	$3,200
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	None	None	$3,200

On Form		Date Submitted
10-237	X	1/13/78
10-238		
10-250		
10-451		

11. REFERENCES AND CONTACTS:

California Department of Fish and Game, Redding, CA.

Grinnell, Dixon and Linsdale. 1930. Vertebrate natural history of a section of northern California through the Lassen Peak Region. Univ. of Calif. Press, Berkeley, CA.

Hall and Kelson. 1959. The mammals of North America. Ronald Press, New York.

Hensley, A.L., 1946. A progress report on beaver management in California. Calif. Dept. of Fish and Game. 32(2):87-99.

Kahl, J.R., 1969. Beaver habitat management plan. Lassen National Forest. Susanville, CA.

Miller and Kellog. 1955. List of North American recent mammals. Smithsonian Institute. Washington, D.C.

Tappe, D.T., 1942. The status of beavers in California. Game Bulletin No. 3. Calif. Dept. of Fish and Game. 59 pp.

12. DATE SUBMITTED: October, 1977.

NATURAL RESOURCES PROJECT STATEMENT

1. PARK AND REGION: Lassen Volcanic National Park, Western Region

2. PROJECT NAME AND NUMBER: Deer Herd and Range Monitoring

   LAVO-RM-3

3. STATEMENT OF PROBLEM:

   The park is summer range for large numbers of black-tailed and mule deer. In some areas numbers appear excessive and some preferred browse species are declining.

4. WHAT HAS BEEN DONE:

   A biological reconnaissance in 1957 documented over utilization in some areas of the park. In 1968, an analysis of deer browse condition concluded that over utilization was occurring on some sites.

5. DESCRIPTION OF THE WORK TO BE UNDERTAKEN:

   Permanent transects will be established in key areas to assess annual forage supplies, degree of deer pressure and condition and trend of preferred and staple browse species. Herd composition counts will be made in spring and fall to determine fawn production and survival rates. Principal fawning areas will be mapped.

6. LENGTH OF TIME NEEDED:

   Continuing.

7. WHAT WILL HAPPEN IF NOT UNDERTAKEN:

   Insufficient information will be available for use in formulating deer management plans and management may be misdirected causing further deterioration of habitats.

8. WHAT ARE THE ALTERNATIVES:

   The alternative is to not monitor.

9. PERSONNEL:

Total 43 MD/yr broken down as follows:
8 MD/yr for herd composition counts
10 MD/yr for fawning site search and monitor for change
20 MD/yr for reading transects
5 MD/yr for computation and data analysis

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	$1,800	$1,800	$1,800
Other Than Personal Services	None	None	200	200	200
GRAND TOTAL	None	None	$2,000	$2,000	$2,000
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	$2,000	$2,000	$2,000

On Form		Date Submitted
10-237	X	1/13/78
10-238		
10-250		
10-451		

11. REFERENCES AND CONTACTS:

Sumner, L., 1957. Biological Reconnaissance of Lassen Volcanic National Park. Unpub. NPS Doc. 11 pp.

Donart, G.B., 1968. Analysis of deer browse condition and ecological relationships in Lassen Volcanic National Park. Humboldt State Coll., Arcata, CA 48 pp.

Anon. 1969. USDA Forest Service. California Region. Range Environmental Analysis Handbook.

Anon. 1963. Deer management handbook. State of Calif. Dept. of Fish and Game. iii + 77 pp.

12. DATE SUBMITTED: October, 1977.

10. ADMINISTRATION AND LOGISTICS:

Funding	Year in Program Sequence				
	1st	2nd	3rd	4th	5th
Personal Services	None	None	$2,100	$2,100	$2,100
Other Than Personal Services	None	None	$10,000	None	None
GRAND TOTAL	None	None	$12,100	$2,100	$2,100
Funds Available in Park Base	None	None	None	None	None
Funds Requested from Regional Office	None	None	$12,100	$2,100	$2,100

On Form	Date Submitted
10-237	
10-238	
10-250	
10-451	

11. REFERENCES AND CONTACTS:

David Geissinger, NPS Western Region Air Quality Coordinator.

State of California Air Resources Board, 1709 11th Street, Sacramento, CA 95814.

Clean Air Act of 1970 and 1977 Amendents.

12. DATE SUBMITTED: February, 1979.

NATURAL RESOURCES MANAGEMENT AND RESEARCH PROJECTS

PROGRAMMING SHEET

LASSEN VOLCANIC NATIONAL PARK

April 1981

Area Priority No.	Reference No.	Inc. or Pkg. No	Project Title	YR 1 (82) Base	YR 1 (82) New	YR 2 (83) Base	YR 2 (83) New	YR 3 (84) Base	YR 3 (84) New	YR 4 (85) Base	YR 4 (85) New	YR 5 (86) Base	YR 5 (86) New
1	N 33	122	Inventory Biotic Communities		10,000		10,000		10,000				
2	RM 6	115	Monitor Natural Fire		3,200		3,200		3,200		3,200		3,200
3	RM 8	115	Monitor Aquatic Ecosystems		6,000		2,200		2,200		2,200		2,200
4	RM 7	117	Prescribed Fire		15,000		15,000		15,000		15,000		15,000
5	N 34	129	Meadow Ecology		10,000		10,000						
6	RM 10	137	Backcountry Use Monitoring		6,000		6,000		6,000		6,000		6,000
7	N 40		Inventory Aquatic Biota		10,000								
8	N 35		Chaparral Ecology		10,000		10,000						
9	RM 5		Forest Fuels Inventory				17,500		17,500		17,500		
10	N 37		Analyze Pre-Columbian Ecosystems				10,000						
11	N 38		Willow and Alder Ecology				10,000		10,000				
12	RM 11		Monitor Air Quality						12,100		2,100		2,100
13	W 1		Park Water Resources Plan						10,000		10,000		
14	N 44		Feasibility Study - Bighorn						10,000		10,000		
15	RM 3	115	Deer Herd and Range Monitoring						2,000		2,000		2,000
16	N 43		Wolverine & Fisher Status Survey								10,000		10,000
17	RM 4		Bear Management								10,000		
18	N 41		Resource Inventory - Stream								10,000		10,000
19	W 3		Geological Mapping								10,000		10,000
20	N 42		Lake Ecology										10,000
21	RM 2	113	Beaver Census & Habitat Survey										3,200
22	N 36	138	Endangered Plant Survey										10,000
23	W 2		Monitor Diamond Peak										5,000
24	RM 9		Restore Drainage Patterns										5,000
					70,200		93,900		98,000		108,000		93,700